

REMARKS

Claims 1-9 and 12-19 will be pending upon entry of the present amendment. Claims 1, 12-13, and 18 are amended and claim 19 is new. No new matter is being added. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Amendment To The Abstract

The Office Action identified the Abstract as being written in the form of a claim. Applicants hereby amend the Abstract. No new matter is added.

Rejections Under 35 U.S.C. § 101

Claims 10 and 11 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter and are hereby cancelled without prejudice, thereby rendering this rejection moot.

Rejections Under 35 U.S.C. § 103

Claim 1, 2, 7-13 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,226,443 to Morioka et al. (hereinafter “Morioka”) in view of Applicants’ admitted prior art (hereinafter “AAPA”) described in the section entitled “Description of the Prior Art” in the specification of the instant application.

In the rejection of independent claims 1, 10 and 12, AAPA is relied on for allegedly disclosing “that index (n) is used in shuffling (Page 3, lines 1-21); AAPA mentions reverse mapping of function f(n) that is deshuffling” and Morioka is relied on for allegedly disclosing all of the other limitations recited in the aforementioned claims. It is respectfully submitted that the United States Patent and Trademark Office (USPTO) has failed to establish a *prima facie* case of obviousness for at least the following reasons.

It is well established that the USPTO bears the burden for establishing a *prima facie* case of obviousness. Recent decisions by the Board of Patent Appeals and Interferences (BPAI) have reaffirmed the USPTO’s burden.

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). In order to establish a prima facie case of obviousness, the Examiner must show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988)). “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)(quoted with approval in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)).

Ex Parte Baohua Qi et al., Appeal 2008-2013, 2008 WL 2615751; see also, *Ex Parte Susumu Tanaka et al.*, Appeal 2007-3845, 2008 WL 867790.

1. AAPA Teaches Away From Proposed Modification

In *Honeywell International Inc. v The United States*, 81 Fed.Cl. 514, 560 (Fed.Cl., 2008), the court stated the following:

A reference “may be said to teachaway when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed.Cir.1994); see also KSR, 127 S.Ct. at 1740 (“The Court relied upon the corollary principle that when the prior art teachesaway from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.”) (citing Adams, 383 U.S. at 51-52, 86 S.Ct. 708).

The Manual of Patent Examining Procedures (MPEP), Eighth Edition, Revision 6, states the following with regard to “teaching away:”

A prior art reference that "teaches away" from the claimed invention is a significant factor to be considered in determining obviousness ... *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994)

MPEP 2145.D.1.

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)

MPEP 2145.D.2.

The totality of the prior art must be considered, and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness. *In re Hedges*, 783 F.2d

1038, 228 USPQ 685 (Fed. Cir. 1986) (Applicant's claimed process for sulfonating diphenyl sulfone at a temperature above 127°C was contrary to accepted wisdom because the prior art as a whole suggested using lower temperatures for optimum results as evidenced by charring, decomposition, or reduced yields at higher temperatures.).

Furthermore, "[k]nown disadvantages in old devices which would naturally discourage search for new inventions may be taken into account in determining obviousness." *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966).

MPEP 2145.D.3.

The Office Action cites page 3, lines 1-21, of Applicants' specification for allegedly disclosing the use of an index (n), which is used in shuffling, being used in a function $f(n)$ for shuffling and that de-shuffling may be performed via an inverse function $f^{-1}(n)$. The Office Action proposes to modify Morioka such that an index used in shuffling may be used in de-shuffling.

Applicants respectfully submit that Applicants' specification clearly teaches away from the proposed modification. At page 3, lines 18-25, Applicants' specification states the following:

The DV audio signal is decoded to enable the audio to be reproduced by playback equipment, such as a video cassette player. If the shuffled coded data may be represented as $(t_1, t_2, s_1, b_1) = f(n)$, then the reverse mapping f^{-1} may be considered to provide the correct order of data. This concept is shown in Figure 4.

However, this concept is not generally possible in practice, as the shuffling process involves modular and non-linear operations, such as $\lfloor x \rfloor$, which result in a one-to-many reverse relationship. It is therefore not generally possible to easily find a suitable reverse mapping f^{-1} .

(Emphasis added.)

Therefore, Applicants respectfully submit that AAPA teaches away from the proposed modification because one of ordinary skill in the art at the time of the inventions would "be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley, supra*. Consequently, Applicants respectfully submit that the USPTO has failed to meet its burden for establishing a *prima facie* case of obviousness, and Applicants respectfully request that the rejections of claims 1-9 and 12-19 be withdrawn.

2. Fetching Single DIF Block And De-Shuffling

Independent claim 1 recites, inter alia:

- (i) fetching a single Digital Interface Frame (DIF) block from the DV data stream ...;
- (ii) de-shuffling the first byte of data in the single DIF block to determine its index (n) in the PCM frame;
- (iii) repeating (ii) on subsequent bytes of data of the single DIF block until the last byte in the single DIF block is processed;
- (iv) writing the de-shuffled data ...; and
- (v) repeating (i) to (iv) for subsequent DIF blocks in the DV frame.

(Emphasis added.)

Independent claim 12 recites, inter alia:

fetching a single Digital Interface Frame (DIF) block from the DV data stream ...;

de-shuffling the first byte in the single DIF block to determine its index (n) in the PCM frame; ... and

repeating the fetching, de-shuffling, and determining for subsequent DIF blocks in the DV frame.

(Emphasis added.)

The Office Action alleges that Morioka discloses “fetching a single Digital Interface Frame (DIF) block from the DV data stream” and cites Figure 19 and column 18, line 45 through column 19, line 35. AAPA failed to disclose fetching a Digital Interface Frame (DIF) block from the DV data stream.

Applicants respectfully submit that Morioka is directed toward an apparatus for recording and reproducing digital data. (Abstract.) The portion of Morioka cited in the Office Action discusses rates at which a stream of data may be accessed. (“The DVC 4x/1x VTR 1005 can record and reproduce a DVC compressed signal onto/from a DVC cassette tape 1007 not only at a normal rate but also at a rate four times as high as the normal rate (herein, “1x” means a normal rate and “4x” means a four-times-higher rate).” (Column 17, lines 54-59.)) In the cited portion of Morioka, Morioka states the following:

The stream which has been input to the I/F card 1902 at the input 4x or 1x is input to the memory process 1901 via the PCI bus. In performing a recording operation 1905 onto the HDD 1009, first, the DIF signal is directly recorded onto a DIF recording HDD 1906 (or 1009). Simultaneously, in performing the recording operation 1905, only the audio *blocks* are extracted from the DIF; deshuffled; converted into temporally continuous PCM audio having a compatibility with a file format which is supported by the Windows such as a WAVE system or the like; and then recorded onto an audio recording HDD 1907 (or 1009).

(Column 18, line 61 through column 19, line 4, emphasis added.)

Morioka discusses processing *blocks* of audio DIF. Morioka does not disclose, teach, or suggest that a single DIF frame is retrieved and that the retrieved DIF frame is de-shuffled, and then, after de-shuffling, another DIF frame is retrieved. Therefore, for at least the reasons discussed above, Morioka and AAPA, individually and collectively, fail to disclose, teach, or suggest at least the aforementioned limitations, and Applicants respectfully request that the rejection of claim 1 and claim 12 be withdrawn.

New Claim 19

Newly added independent claim 19 includes limitations similar, but not identical, to amended independent claim 1. For at least the reasons provided above, Applicants respectfully submit that claim 19 is allowable.

Claim amendments

Claims 1, 12-13, and 18 are amended to clarify that certain recitations contained therein and in their related claims do not fall within the scope of 35 U.S.C. § 112, sixth paragraph. Other amendments are made to the claims as shown to more precisely recite the subject matter contained therein.

Conclusion

Overall, the cited references do not singly, or in any motivated combination, teach or suggest the claimed features of the embodiments recited in independent claims 1, 12 and 19 and thus such claims are allowable. The remaining claims depend from allowable independent claims 1 and 12, and also include additional limitations; consequently, such claims are likewise

Application No. 10/795,796
Reply to Office Action dated April 14, 2008

allowable. If the undersigned attorney has overlooked a relevant teaching in any of the references, the Examiner is requested to point out specifically where such teaching may be found.

In light of the above amendments and remarks, Applicants respectfully submit that all pending claims are allowable. Applicants, therefore, respectfully request that the Examiner reconsider this application and timely allow all pending claims. Examiner Khan is encouraged to contact Mr. Ringer by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, he is encouraged to contact Mr. Ringer by telephone to expediently correct such informalities. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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